PATENT APPLICATION

PATENT AND TRADEMARK OFFICE

BEFORE THE HONORABLE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of

Toshiaki OKABE et al.

On Appeal from Group: 2176

Application No.: 09/725,765

Examiner: R. SINGH

Filed: November 30, 2000

Docket No.: 108001

For: DOCUMENT INTEGRATED MANAGEMENT APPARATUS AND METHOD

APPEAL BRIEF TRANSMITTAL

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Attached hereto is our Brief on Appeal in the above-identified application.

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Respectfully submitted,

James A. Oliff
Registration No. 27,075

Stephen P. Catlin
Registration No. 36,101

JAO:SPC/jnm

Date: May 21, 2007

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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BRIEF ON APPEAL

Appeal from Group 2176

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400
Attorneys for Appellants

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I. REAL PARTY IN INTEREST

The real party in interest for this appeal and the present application is Fuji Xerox Co., Ltd., by way of an Assignment recorded in the U.S. Patent and Trademark Office at Reel 11334, Frame 0886.

II. RELATED APPEALS AND INTERFERENCES

There are no prior or pending appeals, interferences or judicial proceedings, known to Appellant, Appellant's representative, or the Assignee, that may be related to, or that will directly affect or be directly affected by or have a bearing upon, the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-5 and 7-14 are on appeal.

Claims 1-5 and 7-14 are pending. Claim 6 has been previously canceled.

No claims are allowed.

Claims 1-5 and 7-14 are rejected.

IV. STATUS OF AMENDMENTS

No Amendment After Final Rejection has been filed.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The application includes five independent claims, including independent claims 1, 8, 9, 13, and 14 directed to document integrated management apparatus, methods and mediums containing computer programming code for performing the various methods. The apparatus separately manages document information and linkage information (pg. 4, lines 1-7) and provides link information based on a history identifier identifying an original and update or revision of a document or document set and a status identifier identifying a process step (to which the document set relates). The document information and the link information are linked and used for managing databases containing document sets that relate to particular steps in a process.

A. Independent Claim 1

The invention of claim 1 is directed to a document integrated management apparatus 100, such as that shown in Fig. 1, that performs integrated management on plural documents stored in plural databases 108 managed by unique controllers 107 (pg. 10, line 24 to pg. 26, line 25, particularly, page 11, lines 1-20).

A linkage information management unit 101 (Fig. 1) stores and manages linkage information 102 among documents stored in the plural databases 108 or document sets (A-D in Fig. 2) having one or more documents related to each other by supporting one or more processes. The linkage information 102 includes links to the original and the update or revised document or document set (for example, shown in Figs. 4-6). The links are based on the history identifier (cols. 2-3 of Fig. 3B) and based on the status identifier (last col. of Fig. 3B). The linkage information management unit is better described on pg. 15, line 22 to pg. 18, line 6 and Figs. 5-6.

A document information management unit 103 (Fig. 1) stores and manages document information 104 on document sets (A-D in Fig. 2) each having one or more documents related

to each other by supporting one or more of a plurality of processes (see the processes shown for example on the top of Fig. 2 and described on pg. 12, lines 14-16). The documents may be stored in plural ones of the databases 108. The document information includes at least one identifier, including a history identifier (col. 2 of Fig. 3B) identifying an original and update or revision of a document or document set and a status identifier (last col. of Fig. 3B) identifying a process step within the plurality of processes to which the document relates. Additional details of the document information management unit 103 are described on pg. 13, line 12 to pg. 15, line 21).

The linkage information 102 and the document information 104 are linked to each other when the identifier of the document set in the linkage information corresponds with the identifier of the document set included in the document information (pgs. 15-16 and Figs. 3-6). The linkage information 102 includes links to the original and the update or revised document or document set based on the history identifier and based on the status identifier (that identifies a process step to which the documents are associated) (Fig. 3B and pg. 14, lines 4-12).

B. Independent Claims 8 and 13

Independent claim 8 is directed to a document integrated management method for performing integrated management on plural documents stored in plural databases 108 managed by controllers 107 unique to the databases (Fig. 1). The method stores linkage information among documents stored in the plural databases 108 or document sets (A-D in Fig. 2) each having one or more documents related to each other by supporting one or more of a plurality of processes (see the top row in Fig. 2). The linkage information includes at least one identifier of a document set (see Figs. 5-6 and pgs. 16-18). The method also stores document information (Fig. 3B) on the document sets (each set having one or more documents related to each other by supporting one or more of a plurality of processes). The document information includes at least one identifier of a document set and includes a history

identifier identifying an original and update or revision of a document or document set (cols. 2-3 in Fig. 3B) and a status identifier identifying a process step within one of the plurality of processes (last col. in Fig. 3B). Also see pg. 14, lines 4-12. The method further links the linkage information and the document information with each other when the identifier of the document set included in the linkage information corresponds with the identifier of the document set included in the document information (pgs. 15-16 and Figs. 3-6). The linkage information includes links to the original and the update or revised document or document set based on the history identifier and based on the status identifier (that identifies a process step to which the documents are associated) (pg. 14, lines 4-12).

Independent claim 13 is directed to a medium to provide a computer program to perform, on a computer system, document integrated management processing that performs the method of independent claim 8. This is supported, for example, by original claim 13 and page 8, line 23 to pg. 9, line 8, as well as by the system shown in Fig. 1, and the linkage and document information shown in Figs. 3-5.

C. Independent Claims 9 and 14

Independent claim 9 is directed to a document integrated management method for performing integrated management on plural documents stored in plural databases 108 managed by controllers 107 unique to the databases (Fig. 1). The method selects a document set identifier for searching for document information on document sets having one or more documents related to each other by supporting one or more of a plurality of processes, the documents being stored in plural databases 108 (Figs. 9-11 and pg. 22, lines 4-12). The selection is based on designation of document or document set or search data inputted in a common format from a client system (Figs. 9-11 and pg. 21, lines 1-23). The document information includes document set identifiers, a history identifier for identifying an original and update or revision of a document or document set, and a status identifier (Fig. 3B and pg.

14, lines 4-12). Independent claim 9 also selects an access target database by searching linkage information (among the documents stored in the plural databases 108 or the document sets having documents related to each other by supporting one or more of a plurality of processes) corresponding to the selected document set identifier (Figs. 6 and 10-11 and pg. 17, lines 21-26 and pg. 22, lines 23-26). The linkage information includes document set identifiers (pg. 22, lines 4-12 and Fig. 10) and the linkage information includes links to the original and the updated or revised document or document sets based on the history identifier and based on the status identifier (Fig. 3B and pg. 14, lines 4-12).

Independent claim 14 is directed to a medium to provide a computer program to perform, on a computer system, document integrated management processing that performs the method of independent claim 9. This is supported, for example, by original claim 14 and page 8, line 23 to pg. 9, line 8, as well as by the system shown in Fig. 1, and the flowcharts of Figs. 10-11.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The following grounds of rejection are presented for review:

1) Claims 1-5 and 7-14 are rejected as having been obvious under 35 U.S.C. §103(a) over U.S. Patent Appl. Publ. No. US2003/0177111 to Egendorf in view of U.S. Patent No. 5,946,689 to Yanaka, further in view of U.S. Patent No. 6,728,947 to Bengston.

VII. ARGUMENT

An Office Action mailed November 14, 2006 finally rejects claims 1-5 and 7-14 under 35 U.S.C. §103(a) over U.S. Patent Publication No. 2003/0177111 A1 to Egendorf et al. (Egendorf) in view of U.S. Patent No. 5,946,689 to Yanaka et al. (Yanaka) and further in view of U.S. Patent No. 6,728,947 to Bengston. This rejection is respectfully traversed.

A. Law Analysis

To establish a *prima facie* case of obviousness, three criteria must be met: (1) there must be some suggestion or motivation to modify or combine teachings; (2) there must be a reasonable expectation of success; and (3) the prior art must teach or suggest all claim limitations (MPEP §2143).

In rejecting claims under 35 U.S.C. §103(a), it is incumbent on the Examiner to establish a factual basis to support the legal conclusion of obviousness. See, *In re Fine*, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one of ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. *Universal Inc. v. F-Wiley Corp.*, 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988), cert. denied, 488 U.S. 825 (1988). These showings by the examiner are an essential part of complying with the burden of presenting a *prima facie* case of obviousness.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be suggested or taught by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1970). All words in a claim must be considered in judging the patentability of that

claim against the prior art. *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

It is well settled that a rejection based on 35 USC §103(a) must rest on a factual basis, which the Patent and Trademark Office has the initial duty of supplying. *In re GPAC, Inc.*, 57 F.3d 1573, 1582, 35 USPQ2d 1116, 1123 (Fed. Cir. 1995). This may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved. See *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996).

In determining obviousness, the following four factors must be considered: (1) the scope and content of the prior art; (2) any differences between the prior art and the claims at issue; (3) the level of ordinary skill in the pertinent art; and (4) any secondary considerations evidencing non-obviousness, such as commercial success, copying, long felt but unsolved needs, failures of others, unexpected results, etc. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. ___, ___, 82 USPQ2d 1385, 1391 (2007), *citing Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18 (1966).

In *KSR*, the Supreme Court confirmed that, in evaluating obviousness, "an expansive and flexible" approach is to be taken, *i.e.*, "rigid and mandatory formulas" are improper. 82 USPQ2d at 1395-97. More specifically, the Court indicated that combining prior art elements to perform their respective established functions is likely to be obvious when it does no more than yield predictable results. *Id.* at 1395. However, when the prior art teaches away from combining known elements, discovery of a successful way to combine them is more likely not obvious. *Id.* at 1395.

Obviousness is not shown merely by demonstrating that each of the elements of a claimed combination was known in the art. Rather, "it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine [or

modify] the elements" as claimed. *Id.* at 1396. However, "any need or problem known in the field of endeavor at the time of invention and addressed by the patent" can provide such a reason, as the patentee's particular motivation/purpose does not control. *Id.* at 1397. Also, a precise teaching of claimed subject matter is not needed, as familiar items have obvious uses beyond their primary purposes, and one must consider inferences/creative steps that a person of ordinary skill ("a person of ordinary creativity, not an automaton") would have employed. *Id.* at 1396-97. Moreover, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990) and MPEP §2143.01.

A long-standing obviousness test used by the Federal Circuit is the "teaching-suggestion-motivation" (TSM) test, under which a patent claim is proved obvious only if a teaching, suggestion or motivation (*i.e.,* a reason) to combine or modify prior art teachings is found in the prior art, in the nature of the problem, or in the knowledge of a person of ordinary skill in the art. *Id.* at 1391. The Supreme Court in *KSR* confirmed that "[t]here is no necessary inconsistency between the idea underlying the TSM test and the *Graham* analysis," as long as the TSM test is not applied rigidly or narrowly. *Id.* at 1396-97. According to Federal Circuit decisions consistent with *KSR*, the motivation/suggestion/teaching may but need not be found explicitly in the prior art, and the prior art may but need not be combined or modified for the same reasons contemplated by the inventor. *In re Kahn,* 441 F.3d 977, 987-88 (Fed. Cir. 2006) (cited with approval in *KSR*, *id.* at 1396). Furthermore, "prior art" is broader than just the references sought to be combined, and motivation may be established based upon, *inter alia,* basic principles, common knowledge and/or common sense. *DyStar Textilfarben GMBH & Co. Deutschland KG v. C.H. Patrick Co.,* 464 F.3d 1356, 1360-61, 1367 (Fed. Cir. 2006); *see also Alza Corp. v. Mylan Labs., Inc.*, 464 F.3d 1286, 1291, 1294

(Fed. Cir. 2006) (decisions cited by *KSR, id.* at 1397, as providing "a broader conception of the TSM test" than the Federal Circuit's erroneous application of the test in *KSR*). Regardless, however, a conclusion of obviousness should be explicitly supported by "articulated reasoning with some rational underpinning" and not "by mere conclusory statements." *See KSR, id.* at 1396, *quoting Kahn.*

The motivation inquiry begins with application of the so-called "analogous art" test. This threshold test requires that each prior art reference relied upon be either (1) in the field of the inventor's endeavor or (2) reasonably pertinent to the problem with which the inventor was concerned, based on the judgment of a person having ordinary skill in the art. This test is related to the TSM test in that the TSM test "picks up where the analogous art test leaves off and informs the *Graham* analysis." *Kahn,* 441 F.3d at 987.

The level of skill in the art is determined entirely with reference to a hypothetical person of ordinary skill in the art presumed to be aware of all of the pertinent prior art. Relevant factors in determining the level of skill include the educational level of active workers in the field, the type of problems encountered in the art, prior art solutions to such problems, the rapidity of innovations in the art, and the sophistication of the technology. *In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). Determination of the level of skill is often critical to determinations of whether prior art is "analogous art" and whether one of ordinary skill in the art would have been motivated to combine (or modify) prior art references. *DyStar,* 464 F.3d at 1361-63, 1370.

B. Claims 1-5 and 7-14 Would Not Have Been Obvious Over Egendorf in View of Yanaka and Bengston

An Office Action mailed November 14, 2006 finally rejects claims 1-5 and 7-14 under 35 U.S.C. §103(a) over U.S. Patent Publication No. 2003/0177111 A1 to Egendorf et al.

(Egendorf) in view of U.S. Patent No. 5,946,689 to Yanaka et al. (Yanaka) and further in view of U.S. Patent No. 6,728,947 to Bengston.

1. Asserted Combination Does Not Teach the "History Identifier" or "Linkage Information" Features Recited in the Claims

The Office Action, on page 5, acknowledges that Egendorf does not teach or suggest document information that includes a history identifier identifying an original and update or revision of a document or document set, as recited in independent claim 1 and similarly recited in independent claims 8, 9, 13 and 14.

Further, the Office Action acknowledges that Egendorf does not teach or suggest linkage information that includes links to an updated or revised document or document set based on a history identifier, as recited in independent claim 1 and similarly recited in independent claims 8, 9, 13 and 14. However, the Office Action asserts that Yanaka discloses such features in the Abstract and at cols. 2-6 Applicants disagree.

The Office Action's reliance on Yanaka to teach "document information that includes a history identifier identifying an original and update or revision of a document or document set" and "linkage information that includes links to an updated or revised document or document set based on a history identifier" is based on an incorrect interpretation of Yanaka.

Yanaka, in the Abstract and at cols. 2-6, cited by the Office Action, discloses a method of correctly detecting update contentions between databases in a distributed database system. For example, as described in Yanaka, at col. 1, line 65 through col. 2, line 29, and with respect to Fig. 2, at col. 4, lines 1-36, and with respect to Fig. 9, at col. 6, lines 30-60, a primary replica database and a secondary replica database, in Yanaka, are each composed of sets of data. Each set of data represents an update unit within each of the respective primary and secondary databases.

A set of data 201 in Yanaka includes: a data identifier 202 that uniquely identifies the set of data 201; a history identifier 203 that points to an update serial number history 207; and attribute data 204 that contains the actual data stored in data set 201. The update serial number history 207 contains: a node number 205 that identifies a computer originating an update; and an update counter 206 that stores a number indicative of the number of times set of data 201 has been updated.

As described in Yanaka at col. 6, line 30 through col. 7, line 49, update serial number history 207 associated with each set of data 201 supports a replication decision in which a data server decides whether or not it should update a set of data 201, stored within its database, to reflect a change in a corresponding set of data 201 reported by a remote data server. The history table merely allows the receiving database to determine whether the dataset received is more recent than data currently stored in the database.

In general, if the data server determines based on the update serial number history 207 that the received set of data 201 is more recent than the corresponding set of data 201 in its local database, the local database is updated with the received set of data 201. If the data server determines based on the update serial number history 207 that the received set of data 201 is not as recent as the corresponding set of data 201 in its local database, the local database is not updated with the received set of data 201.

Thus, even if combined with Egendorf, Yanaka fails to teach (1) a history identifier identifying an original and update or revision of a document or document set, and; (2) linkage information [that] includes links to the original and the update or revised document or document set based on the history identifier, as recited in independent claim 1 and similarly recited in independent claims 8, 9, 13, and 14.

For example, nowhere in the cited passage does Yanaka teach or suggest storing original as well as updates or revisions of a document or document set. Instead Yanaka

teaches that a data set which is determined to be less current than a received data set is "updated" with the new received data set (e.g., see col. 6, lines 58-60). Nowhere does Yanaka teach or suggested that the previous version of the data set is saved, much less that the system in Yanaka maintains links to such previous versions of the data sets. For example, the data fields within update serial number history 207, i.e., node number 205 that identifies a computer originating an update, and an update counter 206 that stores a number indicative of the number of times set of data 201 has been updated, would not be suitable for maintaining links to such previous versions of the data sets, even if such previous versions were maintained.

Therefore, even if Yanaka were combined with Egendorf, the combination would not overcome the deficiencies of Egendorf acknowledged by the Office Action. Moreover, if anything, when Yanaka is read "as a whole" Yanaka "teaches away" from the claimed inventions by teaching an undesirability of retaining older set information and instead teaches to update the database records with current information. Bengston fails to overcome the deficiencies of Egendorf and Yanaka.

Because each and every feature of independent claims 1, 8, 9, 13, and 14 have not been met by the alleged combination, the subject matter of independent claims 1, 8, 9, 13, and 15 and claims 2-5, 7, and 10-12 dependent therefrom distinguish over the alleged combination.

2. The Office Action Ignores Features Recited in the Claims

Independent claim 1 further recites "the linkage information includes links to the original and the update or revised document or document set based on the history identifier **and** based on the status identifier that identifies a process step within one of the plurality of processes." Independent claims 8, 9, 13 and 14 recite a similar feature.

Nowhere does the Office Action assert, nor do any of the asserted references teach or suggest, a system with linkage information that includes links to the original and the update or revised document or document set based on a history identifier **and** based on a status identifier that identifies a process step within one of the plurality of processes, as recited in independent claim 1 and similarly received in independent claims 8, 9, 13, and 14.

Therefore, even if Yanaka were combined with Egendorf, the combination would not overcome the deficiency of Egendorf acknowledged by the Office Action and a *prima facie* case of obviousness has not been met. Accordingly, independent claims 1, 8, 9, 13 and 14 and claims 2-5, 7 and 10-12 dependent therefrom distinguish over the alleged combination.

3. There Would Have Been No Motivation to Combine the Cited References

As addressed above, the Office Action asserts at page 6, second paragraph, that it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate Yanaka's history identifier in the system of Egendorf because (1) it would have been desirable at the time of the invention to display any updates of data in one database to another so as to ensure that the latest contents were provided to all databases and (2) providing a history identifier of a document would ensure that the document set was up to date and contained the most recent revisions of documents as opposed to an outdated document.

However, the Office Action's reliance on the above-stated motivation for combination is misplaced. For example, in Egendorf, the category-based hierarchy is specifically designed to allow information to be located in different databases. Therefore, there is no benefit to the system described in Egendorf to "display any updates of data in one database to another so as to ensure that the latest contents were provided to all databases," as asserted by the Office Action. Further, the category-based hierarchy in Egendorf is specifically designed to facilitate

locating information sources stored in remote databases. The respective different databases are responsible for the integrity of the content presented, not the system described in Egendorf. Therefore, to supplement the system described in Egendorf with features designed to ensure that the contents maintained by the respective databases for which the system in Egendorf maintains search information is outside the conceivable purpose of the system described in Egendorf, and/or would have changed the basic principle of operation. Thus, one of ordinary skill in the art would not have been led to make the combination alleged.

4. Bengston Fails to Overcome Deficiencies of Egendorf and Yanaka

As admitted in the Office Action, neither Egendorf nor Yanaka teach that the documents support one or more process, nor do they teach or suggest a status ID. For this, the Office Action alleges that one of ordinary skill in the art would look to Bengston's workflow process steps specifying related process data files (documents) to have all documents needed for a process step in order to allow publishers, users, etc. in an organization to execute their assigned process electronically so as to reduce costs compared to performing the process manually. Applicants disagree.

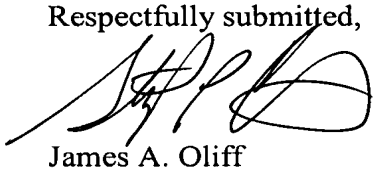
First, Bengston is directed to an automated system for performing workflow and is not pertinent to problems faced by a database management system as in Yanaka or a method of searching information on a computer as in Egendorf. Therefore, one of ordinary skill in the art of database management would not have looked to the non-analogous art of Bengston.

Moreover, even if combined, the combination fails to teach or suggest providing linkage information that links to the original and the update or revised document or document set based on a history identifier and based on a status identifier that identifies a process step as recited in independent claims 1, 8, 9, 13, and 14. Accordingly, independent claims 1, 8, 9, 13 and 14 and claims 2-5, 7 and 10-12 dependent therefrom distinguish over the alleged combination.

VIII. CONCLUSION

For all of the reasons discussed above, it is respectfully submitted that the rejection is in error and that claims 1-5 and 7-14 are in condition for allowance. For all of the above reasons, Appellants respectfully request this Honorable Board to reverse the rejections of claims 1-5 and 7-14.

Respectfully submitted,



James A. Oliff
Registration No. 27,075

Stephen P. Catlin
Registration No. 36,101

JAO:SPC/jnm

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

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APPENDIX A - CLAIMS APPENDIX

CLAIMS INVOLVED IN THE APPEAL:

1. A document integrated management apparatus which performs integrated management on plural documents stored in plural databases managed by controllers unique to the databases, respectively, comprising:

a linkage information management unit that stores and manages linkage information among documents stored in the plural databases or document sets each having one or more documents as documents related to each other by supporting one or more of a plurality of processes, the linkage information including at least one identifier of a document set; and

a document information management unit that stores and manages document information on the document sets each having one or more documents as documents related to each other by supporting one or more of a plurality of processes, the documents being stored in the plural databases, the document information including at least one identifier of a document set;

wherein the document information includes a history identifier identifying an original and update or revision of a document or document set and a status identifier identifying a process step within one of the plurality of processes,

wherein the linkage information and the document information are linked to each other when the identifier of document set included in the linkage information corresponds with the identifier of document set included in the document information and the linkage information includes links to the original and the update or revised document or document set based on the history identifier and based on the status identifier that identifies a process step within one of the plurality of processes.

2. The document integrated management apparatus according to claim 1, wherein the respective controllers of the plural databases have control configurations based on different database management applications,

and wherein the document integrated management apparatus determines an access target database by searching for the document information and the linkage information, based on designation of document or document set or search data inputted in a common format from a client system, and outputs a processing command to the controller of the determined database.

3. The document integrated management apparatus according to claim 1, wherein the linkage information includes the document set identifier, a document identifier for identification of a document or a document of document set linked to the document set, and a database identifier indicating a database holding the document or document set specified by the document identifier,

and wherein the document information includes the document set identifier and linkage information of the document set,

further wherein a document or document set corresponding to the document set identifier selected from the document information is selected from the linkage information, then an access target database is selected from the plural databases based on a database identifier in the linkage information of the selected document or document set, and the document identifier is outputted to the controller of selected database.

4. The document integrated management apparatus according to claim 3, further comprising an archive management unit that manages archive information that associates the database identifier with the corresponding respective database,

wherein the archive management unit specifies the access target database based on the database identifier selected based on the linkage information.

5. The document integrated management apparatus according to claim 4, wherein the archive information indicates linkage between the database identifier and any of document type information of a leaf document or a document set as a single document,

and wherein if access target information is a leaf document, the document information management unit outputs a document identifier to designate the leaf document to the controller of the access target database, while if the access target information is a document set, obtains document information corresponding to the document set.

7. The document integrated management apparatus according to claim 1, wherein the controller of each of the plural databases has a converting unit that converts designation of document or document set or search data, inputted in a common format from a client system, into designation of document or document set or search data unique to the database.

8. A document integrated management method for performing integrated management on plural documents stored in plural databases managed by controllers unique to the databases, respectively, comprising the steps of:

storing linkage information among documents stored in the plural databases or document sets each having one or more documents related to each other by supporting one or more of a plurality of processes, the linkage information including at least one identifier of a document set;

storing document information on the document sets each having one or more documents related to each other by supporting one or more of a plurality of processes, the documents being stored in the plural databases, the document information including at least one identifier of a document set, wherein the document information includes a history identifier identifying an original and update or revision of a document or document set and a status identifier identifying a process step within one of the plurality of processes; and

linking the linkage information and the document information with each other when the identifier of document set included in the linkage information corresponds with the identifier of document set included in the document information and the linkage information includes links to the original and the updated or revised document or document set based on the history identifier and based on the status identifier that identifies a process step within one of the plurality of processes.

9. A document integrated management method for performing integrated management on plural documents stored in plural databases managed by controllers unique to the databases, respectively, comprising the steps of:

selecting a document set identifier by searching for document information on document sets having one or more documents related to each other by supporting one or more of a plurality of processes, the documents being stored in the plural databases, based on designation of document or document set or search data inputted in a common format from a client system, the document information including document set identifiers, history identifier for identifying an original and update or revision of a document or document set and a status identifier identifying a process step within one of the plurality of processes; and

selecting an access target database by searching linkage information among the documents stored in the plural databases or the document sets having one or more documents related to each other by supporting one or more of a plurality of processes, corresponding to the selected document set identifier, wherein the linkage information includes document set identifiers and the linkage information includes links to the original and the updated or revised document or document set based on the history identifier and based on the status identifier that identifies a process step within one of the plurality of processes.

10. The document integrated management method according to claim 9, further comprising the step of extracting a document identifier of a document or document set from

the linkage information and outputting the identifier to the controller of the access target database.

11. The document integrated management method according to claim 9, further comprising the step of searching archive information including the database identifier and document type information indicating a leaf document or a document set as a single document, linked to each other,

wherein if the access target information is a leaf document, a document identifier to designate the leaf document is outputted to the controller of the access target database, while if the access target information is a document set, document information corresponding to the document set is obtained.

12. The document integrated management method according to claim 9, further comprising the step of converting designation of document or document set or search data, inputted in a common format from a client system, into designation of document or document set or search data unique to the database.

13. A medium to provide a computer program to perform, on a computer system, document integrated management processing for integrated management on plural documents stored in plural databases managed by controllers unique to the databases, respectively, wherein the computer program comprising code for:

storing linkage information among documents stored in the plural databases or document sets each having one or more documents related to each other by supporting one or more of a plurality of processes, the linkage information including at least one identifier of a document set;

storing document information on the document sets each having one or more documents related to each other by supporting one or more of a plurality of processes, the documents being stored in the plural databases, the document information including at least

one identifier of a document set, wherein the document information includes a history identifier identifying an original and update or revision of a document or document set and a status identifier identifying a process step within one of the plurality of processes; and

linking the linkage information and the document information with each other when the identifier of document set included in the linkage information corresponds with the identifier of document set included in the document information and the linkage information includes links to the original and the updated or revised document or document set based on the history identifier and based on the status identifier that identifies a process step within one of the plurality of processes.

14. A medium to provide a computer program to perform, on a computer system, document integrated management processing for integrated management on plural documents stored in plural databases managed by controllers respectively unique to the databases, wherein the computer program comprising code for:

selecting a document set identifier by searching document information on document sets having one or more documents related to each other by supporting one or more of a plurality of processes, the documents stored in the plural databases, based on designation of document or document set or search data inputted in a common format from a client system, the document information including document set identifiers, history identifier for identifying an original and update or revision of a document or document set and a status identifier identifying a process step within one of the plurality of processes; and

selecting an access target database by searching linkage information among the documents stored in the plural databases or the document sets as one or more documents related to each other by supporting one or more of a plurality of processes, corresponding to the selected document set identifier, wherein the linkage information includes document set identifiers and the linkage information includes links to the original and the updated or

revised document or document set based on the history identifier and based on the status identifier that identifies a process step within one of the plurality of processes.

APPENDIX B - EVIDENCE APPENDIX

NONE

APPENDIX C - RELATED PROCEEDINGS APPENDIX

NONE